UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,630	11/25/2003	Thomas J. Dinger	LOT920030021US1	7718

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EXAMINER
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ART UNIT	PAPER NUMBER
3715	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hoffmanwarnick.com

	Application No.	Applicant(s)
Office Action Summary	10/721,630	DINGER ET AL.
	Examiner	**Art Unit**	
	Nikolai A. Gishnock	3715	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>03 December 2008</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-3,5 and 6</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-3,5 and 6</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on <u>25 November 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)
1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   In response to Applicant's remarks filed 12/3/2008, claims 4 & 7-20 are cancelled.

Claims 1-3, 5, & 6 are pending.

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

3.   Claims 1-3, 5, & 6 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. It is unclear if "a computing device" recited in Claim 1, lines

8, 13, 18 and 21 refers to the same computing device or different ones.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

5.   Claims 1-3, 5, & 6 are rejected under 35 U.S.C. §101. In order to be considered patent

eligible, a claimed process must contain sufficient ties to a machine, article of manufacture or a

composition of matter. When an abstract concept has no claimed practical application, it is not

patentable. The Supreme Court has reviewed process patents reciting algorithms or abstract

concepts in claims directed to industrial processes. In that context, the Supreme Court has held

that a claim reciting an algorithm or abstract idea can state statutory subject matter only if, as

employed in the process, it is embodied in, operates on, transforms, or otherwise involves

another class of statutory subject matter, i.e., a machine, manufacture, or composition of matter.

Identifying the apparatus requires that the process claim explicitly recite the particular machine

or apparatus, or recite a step that inherently involves the use of a particular machine or

apparatus. In the instant method claims, no apparatus, such as a computer, is claimed outside

implementing the steps of "providing a hierarchical tree" and "providing a learning competency"

recited in claim 1; further, as claimed appears that a person performs the steps of claim 1; thus

the claimed method seems to be a series of purely abstract mental steps.

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth
> in section 102 of this title, if the differences between the subject matter sought to be patented and the
> prior art are such that the subject matter as a whole would have been obvious at the time the invention
> was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness
        or nonobviousness.

8.   Claims 1-3, 5, & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cappellucci et al. (US 2003/0039949 A1), hereinafter known as Cappellucci, in view of

Advanced Distributed Learning. ADL SCORM Version 1.3 Application Profile, Working Draft 0.9

[2002-11-27], hereinafter known as Advanced Distributed Learning.

9.   Cappellucci teaches a computer-implemented method for performing branched rollup for

shared learning competencies in a learning environment, comprising: providing a hierarchical

tree corresponding to the learning environment (Para. 0053), wherein the hierarchical tree

includes a parent node, a first branch having a first child node and a first grandchild node, and a

second branch having a second child node and a second grandchild node (Para. 0054, Table 1;

also, Figure 4, Items M6.16, parent node, and subsequent nodes); providing a learning

competency in the learning environment that is shared by the first grandchild node and the

second grandchild node (two other {information element's} data category items can be

correlated against the same MLO {Master Learning Objective}, Para. 0056); performing an

information rollup (performing a correlation query, a process to find those information objects

and elements that are correlated against a particular information object or element; the system

finds all information object or object correlated against all MLOs which are state standards,

correlated against lesson plans, and retrieves the information objects or elements searched for,

both in Para. 0072) of the first child node (an MLO can be any node on the tree, Para. 0071)

upon a change in state of the learning competency (the system allows a user to modify an

existing information object or element, Para. 0063; in the event it is desirable to add information

resources, each of these objects can be analyzed for content and other metadata categories

and correlated to the MLOs quickly and efficiently, Para. 0059); and performing an information

rollup of the second child node after performing the information rollup of the first child node (if no

child MLOs are found the process can continue where the system can search for all sibling

MLOs of the initial MLOs found, and the system tests to determine if any sibling MLOs were

found, Para. 0074; also, Figure 8A, Items 822 & 824, and Figure 8B, Item 800); generating a

control block for each of the first child node, the second child node and the parent node prior to

the first performing step (meta data populating the data base of Para. 0076-0077 is generated

when the information resource is input in the system, Para. 0077), wherein the control block for

the parent node indicates that the information rollup of the first child node and the information

rollup of second child node must both be performed prior to performing the information rollup of the parent node (the correlation data object {of the database identifying information resources} can include an MLO ID which identifies the MLO that information object is correlated to, Para. 0076; two data category items can be correlated against the same MLO, Para. 0056); and performing an information rollup of the parent node only after performing the information rollup of the first child node and the information rollup of the second child node, eliminating repeated rollups of the parent node (if no sibling MLOs are found, the process can continue to where the system can search for all parent MLOs of the initial MLOs found, the system tests to determine if any parent MLOs were found, Para. 0074), and outputting the hierarchical tree (all information objects and elements available from the system can be presented to a user at the user's computer or printed on a user's printer or a system printer, Para. 0063) [Claim 1].

10.   Cappellucci teaches a computerized system and a computer program product stored on a recordable medium for performing branched rollup for shared learning competencies in a learning environment, comprising: a list compilation system for generating a list of nodes that share a learning competency within a hierarchical tree corresponding to the learning environment (parsing system for establishing a correlation between information objects or elements and one or more MLOs, Para. 0066); a block generation system for generating control blocks for predecessors of the nodes in the list of nodes, wherein each of the control blocks identifies specific successors of the predecessors for which information rollups must be performed before information rollups of the predecessors can be performed (the system provides {correlation data object} tools which facilitate input of attributes of the information object or element, Para. 0077); and a node rollup system for processing the control blocks and performing the information rollups of the predecessors after performing the information rollups of the specific successors (correlation query process, Para. 0072-0074) [Claim 1].

11.   What Cappellucci fails to explicitly teach is wherein the information rollups include communicating the change in state of the learning competency to node from which a predecessor depends [Claim 1]. However, Advanced Distributed Learning teaches that a Rollup is defined as the process of evaluating the Objective and Attempt Progress data for a set of child activities to determine the Objective and Attempt Progress data for the parent, and where the Rollup Rules define a set of rollup control rules for describing this processes [sic] (5.1.5 Rollup Rule Descriptions, page 5-18, first paragraph). Also, the example of Figure 5.1.5.6a, Rollup Rule Condition Illustration, further demonstrates communication of the state of the learning competency up a tree (Illustration 1 depicts a rollup rule that states all of the parent's (AA) children (AAA, AAB and AAC) activities have to be considered "satisfied", in order for its parent (AA) to be considered satisfied, Page 5-22, first paragraph). The rollup of Cappellucci would evaluate the progress data of a child node, according to the rule as taught by Advanced Distributed Learning, to determine the progress of the parent; this function causes the evaluation to be communicated to the parent. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, for the information rollup of Cappellucci to communicate the change in state of the learning competency of a grandchild node to its parent node, in the manner that information rollups are performed, as taught by Advanced Distributed Learning, in order to ensure that all the child learning competencies are satisfied before the parent node is completed, improving reliability of the course sequencing so that a child learning competency may not be skipped [Claim 1].

12.   Cappellucci teaches analyzing the hierarchical tree to identify the second grandchild node as sharing the learning competency with the second grandchild node (information objects are analyzed for content and other metadata categories correlated to the MLOs, Para. 0059; data category items can be correlated against the same MLO, Para. 0056; an MLO can be any

node on the tree, Para. 0071; it is inherent that MLOs can be first and second grandchild

nodes); and adding the second grandchild node to a list of nodes (the system can include a

separate database for identifying each type of information resource and new types of resource

can be added as necessary, Para. 0077) prior to performing the information rollup of the first

child node (as in Para 0074 and Figures 8A & 8B; in this case the rollup of a second grandchild

node {a sibling node to a first grandchild} is performed prior to the child node {the parent of the

grandchild nodes}, case being where the child is the initial MLO found) [Claim 2].

13.   Cappellucci teaches consulting the list of nodes prior to performing the information rollup

of the second child node (data structure can form part of a database that stores the meta data

and is used in queries to find information objects and elements, Para. 0076; this meta data can

be derived from available data when the information resource is input into the system, Para.

0077, the testing steps of Para. 0074 are consulting the correlation database of Para. 0076-

0077 prior to each level of search) [Claim 3].

14.   Cappellucci teaches processing the control block for the first child node prior to

performing the information rollup of the first child node; processing the control block for the

second child node prior to performing the information rollup of the second child node; and

processing the control block for the parent node prior to performing the information rollup of the

parent node (the system tests to determine if any child, sibling or parent MLOs were found, then

continues to the next level, as in Para. 0074) [Claim 5].

15.   Cappellucci teaches wherein the hierarchical tree comprises a parent node, a first

branch having a first child node and a first grandchild node, and a second branch having a

second child node and a second grandchild node (Para. 0054, Table 1; also, Figure 4, Items

M6.16, parent node, and subsequent nodes) [Claim 1].

16.   Cappellucci teaches wherein the learning competency is shared by the first grandchild

node and the second grandchild node, wherein the first child node and the parent node are the

predecessors of the first grandchild node, and wherein the second child node and the parent

node are the predecessors of the second grandchild node (information objects are analyzed for

content and other metadata categories correlated to the MLOs, Para. 0059; data category items

can be correlated against the same MLO, Para. 0056; an MLO can be any node on the tree,

Para. 0071; it is inherent that MLOs can be parent nodes, child nodes, and first and second

grandchild nodes, as in Figure 4) [Claim 1].

17.   Cappellucci teaches wherein the information rollup of the parent node is performed only

after the information rollup of the first child node and the information rollup of the second child

node are performed (if no child MLOs are found the process can continue where the system can

search for all sibling MLOs of the initial MLOs found, and the system tests to determine if any

sibling MLOs were found, Para. 0074; also, Figure 8A, Items 822 & 824, and Figure 8B, Item

800; if no sibling MLOs are found, the process can continue to where the system can search for

all parent MLOs of the initial MLOs found, the system tests to determine if any parent MLOs

were found, Para. 0074) [Claim 1].

18.   Cappellucci teaches wherein the learning environment is implemented in a computerized

environment (Para. 0062) [Claim 6].

19.   Cappellucci teaches wherein the information rollups of the first child node, the second

child node and the parent node are performed a maximum of one time for a change in state of

the learning competency (the system allows a user to modify an existing information object or

element, Para. 0063; in the event it is desirable to add information resources, each of these

objects can be analyzed for content and other metadata categories and correlated to the MLOs

quickly and efficiently, Para. 0059; a correlation query is a process to find those information

objects and elements that are correlated against a particular information object of element,

Para. 0072; also Figures 6 & 7; the correlation query is used to analyze the information objects

and elements when existing information objects or elements are modified), [Claim 1].

20.   Cappellucci teaches wherein the list of nodes is generated, the control blocks are

generated and processed, and the information rollups are performed upon a change in state of

the learning competency (parsing, input of object meta data into database, and correlation query

performed {analysis for content and other meta data categories and correlation to the MLOs} in

the event that information resources are added, Para. 0059, or an existing information object is

modified, Para. 0063) [Claim 1].

Response to Arguments

21.   Applicant's arguments filed 12/3/2008 have been fully considered but they are not

persuasive.

22.   In response to applicant's argument that the amendments satisfy the provisions of 35

USC §101, it is examiner's position that the process of claims 1-6 is not sufficiently tied to

another statutory class of invention, such as a computer, because the steps of: "providing a

hierarchical tree corresponding to the learning environment, wherein the hierarchical tree

includes a parent node, a first branch having a first child node and a first grandchild node, and a

second branch having a second child node and a second grandchild node" and "providing a

learning competency in the learning environment that is shared by the first grandchild node and

the second grandchild node" do not indicate steps performed by a computer; that is, the claim

broadly reads on a person providing the hierarchical tree and learning competency data; thus

the claim fails to recite statutory language. See *In re Comiskey*, 84 USPQ2d 1670 (Fed. Cir.

2007) and *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

23.   In response to the Applicant's arguments that neither the Cappellucci reference nor ADL

SCORM white paper teach eliminating repeated rollups of the parent node by rolling up the

state of a learning competency from grandchild nodes first, then child nodes, and lastly the

parent node: ADL SCORM clearly states at page 5-22, 1st paragraph and at Figure 5.1.5.6a:

Rollup Rule Condition Illustration, a rollup rule states that all of the parent's (AA) children (AAA,

AAB, and AAC) activities have to be considered "satisfied" in order for the parent (AA) to be

considered satisfied. As is explained above, it would have been obvious to one of ordinary skill

in the art, at the time the invention was made, for the information rollup of Cappellucci to

communicate the change in state of the learning competency of a grandchild node to its parent

node, in the manner that information rollups are performed, as taught by Advanced Distributed

Learning, in order to ensure that all the child learning competencies are satisfied before the

parent node is completed, improving reliability of the course sequencing so that a child learning

competency may not be skipped. Where Cappellucci states in Para. 0066 that: "One of the

benefits of the present system is that even with the manual process [of parsing the information

objects and elements for words and phrases likely to be descriptive of the information object or

element, searching the MLOs based upon the words and phrases found, and establishing a

correlation between each information object or element and one or more MLOs as a function

words or phrases found], the correlation step need only be performed once when the new

information is added as compared with the free form information model where each new

information object or element would have to be correlated with each existing information

resource of the system," this means that, because the correlations (i.e., links) between the

learning objectives (i.e., the MLOs) and the information objects and elements (resources) are

rolled up automatically, as described in Paras. 0074-76, the correlation step is performed only

once for each piece of new information. Cappellucci is thus understood to teach recursive

propagation of the learning competency information upwards through a hierarchical tree;

something that is well-known in the data structures and computer science arts. Further, in

response to applicant's arguments that Cappelluci fail to teach "generating control blocks" of the

instant invention, examiner's position is that such control blocks are merely program instructions

and data of the sort that any computer-implemented process creates within computer memory;

in this case, the links in the MLOs and resource information, as well as the data tree in ADL

SCORM created by he program in those inventions clearly demonstrates teachings of

generating control blocks for performing those functions. Applicant's arguments are thus

unconvincing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner

should be directed to Nikolai A. Gishnock whose telephone number is (571)272-1420. The

examiner can normally be reached on M-F 8:30a-5p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Xuan M. Thai can be reached on 571-272-7147. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application

Information Retrieval (PAIR) system. Status information for published applications may be

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would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

2/27/2009
/N. A. G./
Examiner, Art Unit 3715

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